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ABSTRACT

This document is the first part of a 3-part report on the development of a generic State Educational Agency Data Analysis Plan. It contains an overview of the entire effort and the resulting products and discusses how these products can be used by State education agencies (SEAs) as a model for their own development of specific data analysis plans. It also contains a detailed description of the developmental process that was followed in this effort. This latter product is intended to serve as a general guide to SEA personnel interested in either a further extension of the current products or an independent development of data analysis plans for their SEAs. Related documents are EA 004 870 and EA 004 871. (Author)

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THE DEVELOPMENT OF A MODEL STATE DATA ANALYSIS PLAN (SDAP)

(PHASE I)

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PART I

OVERVIEW AND DETAILED DEVELOPMENTAL PROCESS

Submitted to

The State of Ohio

Department of Education

for

The Joint Federal/State User's Guide Task Force

by

Scientific Educational Systems, Inc.

Silver Spring, Md.

31 December 1971

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FOREWORD

This document is Part I of a three part report on the development of a generic State Educational Agency Data Analysis Plan (SDAP - Model I). This development has been performed by Scientific Educational Systems, Inc., under subcontract to the Ohio State Department of Education acting as agent for the Joint Federal/State Task Force on Evaluation and the U. S. Office of Education. This effort was undertaken at the request of the User's Guide Task Force (a sub group of the Federal/State Task Force) interested in the development and dissemination of products usable by the State Educational Agencies (SEA's). This generic SDAP is intended to be usable by SEA's as an illustrative model of how State and Federal data can be used to answer some of the many diverse information needs related to management of educational support programs operated by and within the SEA's.

Part I of this report presents additional background information as well as describing the developmental process followed in producing the SDAP - Model I. Part I contains an overview of the entire effort and the resulting products and discusses how these products can be used by SEA's as a model for their own development of specific data analysis plans. It also contains a detailed description of the Developmental Process which was followed in this effort. This latter product is intended to serve as a general guide to SEA personnel interested in either further extension of the current products or undertaking the independent development of data analysis plans for their SEA's.

Part II contains the SDAP - Model I, itself, the major product of the study. This consists of a set of analysis statements directed at defining answers to a series of questions pertinent to the management of SEA programs. The SDAP itself is presented in a series of tables containing: (a) the questions derived through the study for each of fifteen programs found common to the two SEA's studied; (b) the suggested data analysis to provide the answer sought; and (c) the probable source of the data required for analysis, (these sources include both State and Federal data streams.) This Part also presents a description of what each of these elements is and how the plan can be utilized within the context of the SEA data analysis concepts.

Part III consists of a compendium of data available by program within the studied SEA's. The compendium provides a direct comparison of the information elements which are available by program in the two SEA's and in the Federal/State data system. These comparisons form a partial basis for the SDAP tables, since the data availability was used as a direct indication of where a given type of data or information could be found at the SEA level. This part also contains explanations of the tabular presentations and of special notations used in these presentations. It also briefly defines the relationship of this compendium or a similar SEA-specific one in the utilization of the SDAP - Model I by other SEA's.

ACKNOWLEDGMENTS

It is with great pleasure that Scientific Educational Systems, Inc., takes this opportunity to express its gratitude to those many persons who contributed to the success of this project. The list is far too long to present here in its entirety, but special thanks must be rendered to the following:

Mr. Donald Dyck and Dr. Russell Working, Ohio State Department of Education for their counsel and assistance as Monitors of the project;

Messrs. Louis McGuinness, Michael Ravitch, and Edward Mooney, U. S. Office of Education, for their assistance in the coordination of the effort as successive Federal Co-Chairmen of the User's Guide Task Force;

Dr. R. Douglas Dopp, Connecticut State Department of Education, for his good offices as liaison between Scientific Educational Systems and both the User's Guide Task Force (As State Co-Chairman) and the Connecticut State Department of Education;

Drs. Arthur Olson and John Haberbosch, Colorado State Department of Education, for their assistance and coordination of the effort in the Colorado State Department of Education;

Dr. Jess Pat Elliott, Georgia State Department of Education, for his help in arranging the data collection at the Georgia State Department of Education;

All of the members of the User's Guide Task Force for their continuing encouragement and guidance;

And, finally, the many, many persons of the Connecticut, Colorado, and Georgia State Departments of Education, who gave unstintingly of their valuable time and counsel during the course of the interviews and discussions conducted in their respective states.

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INTRODUCTION

This report describes the development of a generic State Educational Agency Data Analysis Plan (SDAP - Model I) to serve as a model for similar developments by individual SEA's. This Part I of the report includes two major sections which present, first, an overview of the development and of the products and their utilization and, second, a rather detailed description of the process employed by Scientific Educational Systems, Inc., (SES) in developing this plan. The actual SDAP - Model I and its companion Data Compendium are presented in Parts II and III of this report respectively.

SECTION A - OVERVIEW OF SDAP - MODEL I

This section briefly describes some of the background of the study and summarizes the concepts and purposes of the SDAP - Model I development. It then provides an overview of the developmental process and of the products of the study. It concludes with a brief discussion of the applications and utility of the SDAP - Model I and the associated products.

Historical Background of the Project

In a meeting at the Belmont House, near Baltimore, Maryland, the Council of Chief State School Officers and the Commissioner of Education of the United States agreed to the establishment of a Joint Federal/State Task Force on Evaluation, dated 29 August 1968. In the first of a series of related reports of studies of the resulting Joint Comprehensive Evaluation System, SES identified three broad purposes of the developing "Belmont" System:

1. To provide for consolidation of the reporting requirements associated with Federal support of state and local educational programs.
2. To develop a system of acquiring information more useful than formerly for the day-to-day management of educational programs, and for both long and short range planning; and
3. To provide some effective assistance to local personnel engaged in evaluation activities, in the form of training and report writing aids.*

* The Belmont Comprehensive Evaluation System. Phase I--A Review. Washington: Scientific Educational Systems, Inc., 22 November 1969, P.6.

The original Federal/State agreement clearly envisioned the development of a system of mutual interest, responsibility, and benefit. As a consequence, one of the working groups which was formed to achieve the purposes stated above was the User's Guide Task Force, whose basic charge was to develop practicable ways in which the entire enterprise might produce products and results which would be usable by state and local educational management and evaluation personnel.

At the same time, increasing notice began to be taken of the desirability of planning the analysis of the various kinds of data to be produced by the system so that they might be most effectively applied to real management and policy questions. In another report, SES noted: "However, even with precise individual instrument analysis plans, the necessity would remain for the interrelation of these plans, and for the development of a master plan for integrated analysis and reports generation."* Thus, in an effort to achieve the purposes listed above, and in response to these recommendations, the development of a "Master" Data Analysis Plan, covering evaluation reporting for Titles and target groups administered by BESE was undertaken by SES.**

To summarize, the Joint Federal/State Task Force was committed to an evaluation system of utility to the state and local management of education. In addition there was a specific concern with the use and application of information to evaluation and management questions. A User's Guide Task Force was set up to work with these problems. A study for the development of an Analysis Plan at the Federal (BESE) level was carried out (providing a prototype for work at the state level). These developments led naturally to the present study to develop a Data Analysis Plan at the state level as a means for improving the utility of the Federal/State evaluation data for state purposes.

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* Joint Federal/State Task Force on Evaluation Comprehensive Evaluation System--Current Status and Development Requirements. Washington: Scientific Educational Systems, Inc., 8 January 1970, P.165.

** Development of a User-Oriented BESE Data Analysis Plan. Washington: Scientific Educational Systems, Inc., March 1971.

Summary of the Concept and Purposes of the Study

The basic concept for the study was to develop a data analysis plan keyed to the information requirements of State Education Agency (SEA) managers, and utilizing data derived from both the Federal/State System and from state, local and other sources. It was felt that the study might serve as Phase I of a longer and more specific effort, but that the activities of later phases should grow out of the findings of Phase I. Therefore, several delimitations on the study were decided upon in early planning sessions in order to emphasize the generalizability of the results and to keep the study within the bounds of available time and money. First, it was determined that the effort should be directed toward the SEA activities related to "program management." (Initial discussions defined "program management" to include activities directed toward the management of recognized programs, and to exclude SEA internal management, policy planning, and legislative interaction as well as any other non-programmatic or non-LEA (and pupil) directed activities. Further definition was developed in the course of the study.)

Secondly, the development of a model analysis plan was determined to be necessary because of the need for a product more general than a plan developed specifically for a single SEA, or one carrying analysis down to the level of numerical manipulation. A model analysis plan could be developed based on the program management information needs of several SEA's, rather than those of only one. And it could be constructed at a level of generality that would allow other SEA's to use it as the core of their own analysis plans, constructed on the basis of their own specific needs.

Thirdly, it was decided that the model plan would be confined to those aspects of program management found to be common among several SEA's. The management of programs peculiar only to a particular SEA would not be considered in the model, since doing so would restrict the generalizability of the model.

Finally, the development of a generic model plan, to be based on the commonalities of program management activities and information needs, obviously demanded the study of more than one SEA. But, how many?

It was finally determined in discussions with the User's Guide Task Force that a detailed study of the program management activities and requirements in two SEA's, together with verification of their common elements in a third one, would be sufficient to fulfill the requirements for generality of the model while remaining within the time and dollar constraints established for the project.

To summarize then, the User's Guide Task Force authorized the conduct of Phase I of a study to develop a State Data Analysis Plan. Phase I was to create a model SDAP, based upon the commonalities discovered among several states to ensure a certain degree of generalizability of the results to other SEA's. It was to concern itself only with program management, leaving other aspects of SEA management to be dealt with in other efforts and later phases. It was to produce a generic model to serve as an illustration of the process for the use of interested SEA's, since the use of several states upon which to base the Plan precluded making the results specific to any state. Finally, the Model I, generic, State Data Analysis Plan for program management was intended to serve two broad and basic purposes defined by the User's Guide Task Force:

1. The model SDAP should provide a direct indication of the degree to which Federal/State system data might be utilized in meeting SEA program management information requirements. This would result from the examination of the Federal/State system data sets in relation to the information needs to be specified during the study.
2. The model SDAP should serve as an illustrative model for other SEA's of how to define their own management information needs and analyze their own data sets to meet these needs. This would result from the definition of analytic procedures within the model to meet the common SEA information needs developed.

Overview of the Process

This section summarizes the developmental process employed by Scientific Educational Systems, Inc., to produce the generic, Model I SDAP for SEA program management. (The detailed process descriptions may be found in Section B of this report.)

The development of the SDAP required the inputs of many of the personnel of the participating SEA's. It also required the participation of the User's Guide Task Force and USOE personnel from time to time in planning sessions. SES made full use of the good offices of various state personnel in setting up and coordinating the visits of contractor personnel to the various state departments during the course of the study. Furthermore, the inputs of these persons were regularly sought at briefings and planning meetings.

The general procedure was based upon contractor visits to SEA facilities for the purposes of interviewing key program management personnel, of examining data streams and forms, and of reviewing descriptive reports with SEA personnel. The initial interviews served an orientation function, and were followed up with specific questions designed to reveal the managerial functions of the individual with respect to one or more defined programs of activity and the data sets or information needed to carry out such functions. These interviews were translated into Program Descriptions for each of the programs. After this procedure had been carried out in two states, programs common to the two states were identified and Common Program Descriptions developed. There were 15 Programs found to be common to the two SEA's. The Common Program Descriptions were reviewed and verified in the third state, and addenda were prepared based upon these data. Only one common program was not common with the third SEA (Bilingual). All Program Descriptions and Common Program Descriptions were then reviewed for accuracy in Colorado and Connecticut, and revisions made. These then became the basis for the extraction of the Common Information Needs which when expanded and reorganized served as the requirements portion of the model SDAP. Finally, a compendium of data was developed from the Common Program Descriptions and collected data forms, and the information requirements were related to generic data sources drawn from the Compendium in terms of the analytic procedures necessary to bring the data to bear on the information requirements. The construction of the Data Compendium and the Model SDAP were described in a Process Report (this document).

The general procedure summarized above is synopsized in Exhibit A.1.

Exhibit A-1

Synopsis of SDAP Development Process

A. Connecticut SDE Analysis

1. Identify Programs/Persons to be examined in Connecticut. An iterative process, requiring conferences with the User's Guide Task Force and interviews with Bureau Chiefs and others, to locate personnel concerned with program management, evaluation, reporting and other information usage.

2. Develop Program Descriptions for each Connecticut program; consisting of program-related interview(s) and an analysis/synthesis of data derived from the interview(s) to identify:

   (a) The functions performed by the interviewee in relation to the program(s) in question.

   (b) The program objectives and activities and some indications about expected program effects.

   (c) The management decisions to be made or major questions to be answered for program management (by program function as possible).

   (d) The evaluation reporting requirements laid on the program manager and the source of requirement.

   (e) The data inputs used to meet c & d and the sources of the data

   (f) The data sets and forms which may be used by this program from any identifiable source.

B. Colorado SDE Analysis

After all Connecticut programs have been examined, proceed to Colorado:

3. Identify Programs/Persons to be examined in Colorado. Same process as Connecticut.

4. Develop Program Descriptions for each Colorado program. Based primarily on interviews. Same process as in Connecticut.

C. Extract Initial SEA Commonalities

5. Prepare Common Program Descriptions. Identify the common programs for Connecticut and Colorado and prepare Common Program Descriptions. Common programs based upon factors such as:

   a. Program designations (e.g., "Compensatory education services to the disadvantaged").

   b. Stated program goals and objectives.

   c. Funding Sources (e.g., ESEA Title I, or similar state source).

   d. Targeted populations (e.g., directed at bilingual children).

D. Verify Program Descriptions

6. Georgia Verification of Common Program Descriptions. Common Program Descriptions reviewed by Georgia SDE personnel to identify similarities and differences for these Common Programs. Addenda to Common Program Descriptions prepared.

7. Review/Revise all Program Descriptions in Connecticut and Colorado. Resolve issues raised by 6. above; check with original sources for accuracy; revise as necessary.

E. Final Analysis and Reporting Stage

8. Extract Common Information Needs. Analysis of the Common Program Descriptions (and any other relevant data) to identify information needs for each program. Statement of these needs in terms of sets of management questions, evaluation questions, and reporting requirements.

9. Prepare Interim Report. Describe the process of the project to this date; present Information Needs for each Common Program.

10. Revise and Consolidate Information Needs. As the first step of preparing the Model SDAP, expand the statements and questions of Step 8, above. Categorize common programs into groups so that some information needs may be stated across programs. Develop a set of questions which is non-redundant (minimum set).

11. Prepare a Data Compendium. Prepare an inventory of all of the data types which can be derived from the data sets and forms associated with each of the Common Programs. Display these for Colorado, Connecticut, and the Federal/State System for comparison and identification of overlaps in the data sets from these sources.

12. Prepare a Model SDAP. Analyze the information needs in terms of the analytic procedures and data necessary to meet the specified needs. Specify data sources in each case from the Compendium. Note data sets unused and data needs unmet.

13. Prepare a Process Report. Write a narrative report detailing the process followed to produce the products specified in Steps 11 and 12, above.

Overview of the Products

The products of this study are: 1) the SDAP - Model I proper, presented in Part II of this report together with explanatory material directly concerned with understanding the format and content of the plan; 2) the Data Compendium, presented in Part III of the report, contains a detailed listing and comparison of the data elements found in the Connecticut and Colorado SEA's and in the Federal/State Data system; and, 3) the detailed description of the process performed in development of the generic data analysis plan, presented in a later section of this Part I.

The SDAP - Model I is the major product of this study and is intended to be most useful to the SEA's interested in development of their own information systems to support program management. The generic data analysis plan represented by the SDAP - Model I is based on the information requirements for management of fifteen programs found to be common to the Connecticut and Colorado SEA's. (Of these fifteen, fourteen programs were also found to exist in a very similar fashion in Georgia.) The information requirements were developed in the form of a set of management questions, evaluation questions and reporting questions for each program based on an examination of the program management activities reported by the SEA personnel. These program questions were expanded to some extent by incorporating some questions selected from sets developed by the New England School Development Council (NESDEC) pertinent to evaluation of eight of the Federally supported programs included among the fifteen. The resulting set of program questions comprises the basis for development of the actual data analytic statements for the plan.

As will be seen in detailed examination of the SDAP - Model I, these questions and analyses have been formatted in direct relation to the program types and programs to which they apply. The basis for this formatting and the way the resulting plan can be used are discussed in conjunction with the plan itself in Part III.

The Data Compendium is a supportive document to the development and potential use of the SDAP - Model I. The Compendium contains

a listing and comparison of all data elements available in the program related data sets defined by program personnel in the two SEA's studied in detail. It contrasts these data elements across the two SEA's and also compares the data with that collected by the Federal/State Data system. These comparisons include identification of those data elements which are identical from SEA's to Federal data streams and those which differ with respect to either source or level of collection, time of collection, or the set of category breakouts which are used. This product was used in the development of the analysis statements and identification of data sources in the SDAP - Model I, and the Compendium includes an identification of those data elements which would be utilized in answering program managers' questions. It is expected that this document, or a similar one developed specifically by a given SEA, would be necessary in the development of SEA specific analysis plans.

The Process Description reported in the last section of this Part (I) of the report has been prepared to describe the total developmental process followed in preparation of the SDAP - Model I. This product was requested specifically by the members of the User's Guide Task Force after the project was already underway. It was anticipated that this process report would be useful to SEA personnel interested in undertaking such detailed analysis plans or who were currently involved in or contemplating development of SEA management information systems. It is hoped that this report can serve as a partial guide as to the necessary steps in development of a general analysis plan for SEA's. This process report is not intended to be adequate to direct the detailed development of such analysis plans or information systems in SEA's, rather, it may assist the SEA personnel in beginning such developments and may point out some approaches which the SEA can then either adopt or reject as it deems desirable.

SEA Product Usage

This project has been designed and conducted with the information needs of SEA program management uppermost in mind. In the original conceptualization, the requirement was stressed that the products should be usable by SEA's as illustrations of the kinds of data analysis

required to meet management needs. The SDAP Model I was to be a direct but general level illustration of what kinds of questions need to be answered, what kinds of data analyses would provide answers, and where one might expect to find the required data elements. The User's Guide Task Force and the USOE believed that such an illustrative model could be useful to SEA's in further defining and developing their own data analysis and information system capabilities. The SDAP - Model I and the associated products presented herein have been prepared to meet these purposes and to assist SEA's to meet their own needs.

It must be remembered that the SDAP - Model I was neither conceived nor constructed to allow immediate implementation in any SEA, not even the three which contributed so much time and effort to its development. The basic concept of a general model to be constructed in a short period of time and at relatively small expense precluded the development of a specific level analysis plan which could be directly implemented. This is especially obvious when one considers the scope of the model SDAP - including the consideration of the information requirements of fifteen separate programmatic efforts at the SEA level. To develop a specific level analysis plan for even one large program (without the availability of the SDAP-Model I) would be likely to consume as much time and effort as has been expended in the present case. The SDAP - Model I was intended to be and is a model data analysis plan which should serve to illustrate, together with the Process Description, what the elements of an SEA analysis plan should be and something about how one goes about developing such a plan.

The required elements of an SEA analysis plan are identical to the three parts of the SDAP-Model I. These are the set of questions to be answered to allow management functions to be accomplished; the set of data elements which can be or must be used to answer the defined questions; and the set of analysis procedures which define how the data elements are treated to obtain the processed information which will answer the questions. Each of these major elements must be defined by SEA personnel in development of analysis plans to support management information needs.

And, it is in the definition of these elements that the SDAP should be most useful to SEA personnel. First in such a development is the definition of the questions to be answered by the system, as stated above. This task is likely to be the biggest part of the development of an analysis plan or an information support system for any purpose. This is because everyone in any position wants all the information he can get, but almost no one knows what information he really needs to perform his job. This means that the development of the question set that the analysis/information system is to answer is both tedious and tough, since the analyst must tease out of the management personnel those questions they really need to have answered by the plan. It is believed that the set of management, evaluation and reporting questions that have been derived in this study will be directly helpful to SEA personnel attempting to develop such a question set. Granted that this set of questions is not likely to be completely exhaustive and certainly many of the questions asked are not as specific in either working or level of inquiry into the programs as some SEA personnel will want to make their plans; but these questions are pertinent to the information needs of program management at some level of specificity. Thus they may stimulate the thinking of both analysis and management personnel and thereby evoke additional or other questions relevant to the programs under consideration and the pecularities of that SEA. After conduct of the current project and the difficulty experienced in deriving even these general level questions, it is believed that any sort of starting point and basis for development such as this set should be most valuable to SEA personnel involved in such data analysis.

Similarly, the data analysis statements presented in the SDAP - Model I should be helpful to persons working with such developments. Again, these are necessarily general in nature but they illustrate some of the basic techniques applicable to answering typical management questions.

These analysis statements and the references to probable data sources in the SDAP - Model I should be used in conjunction with the Data Compendium by the SEA analyst personnel. These items should provide some meaningful

indications to the analyst about both the analysis processes desirable and some probable sources of data for the analysis. And even where the stated analysis is not exactly appropriate or where no similar data are available to the analysis, we believe that examination of these statements may lead the analysis personnel to solutions they might not have reached otherwise. As with the question set, we believe that these developments should stimulate thinking that might not occur without them. As one State person has recently put this point: "Even if everything you tell me turns out to be wrong, I can then tell that I shouldn't try that approach again."

Although several comments above are negative (in the sense of saying the SDAP - Model I will not do the whole job for any SEA), it is still suggested that interested management personnel should carefully examine these documents and should ask program personnel and analysis personnel to do so also. Where an SEA does not already have a working information system, these documents could be used as a springboard to development of one. And even where SEA's have a working system, the questions and materials included here may provide the kind of stimulation to management thinking mentioned above, which could result in increased information availability and lead to more efficient management of the educational and adjunctive programs in the schools.

A brief description of how to actually use the SDAP - Model I format and how to extract the questions and analyses relevant to a single program is included in the introduction to the SDAP - Model I in Part II. This may be helpful also in understanding a specific usage of the SDAP, since it is directed toward the use of these elements as a model for the development of a data analysis plan specific to a single program.

SECTION B - THE DETAILED DEVELOPMENTAL PROCESS

The basic process defined for development of a generic Model I SDAP was presented to an early meeting of the User's Guide Task Force and followed essentially the course shown in Exhibit B-1. An interim report, comprising the product of Step 9 on this exhibit, was submitted (October 1971) to provide the first review of the developmental process to that date. The present report contains a complete and more refined view of the process of the entire project.

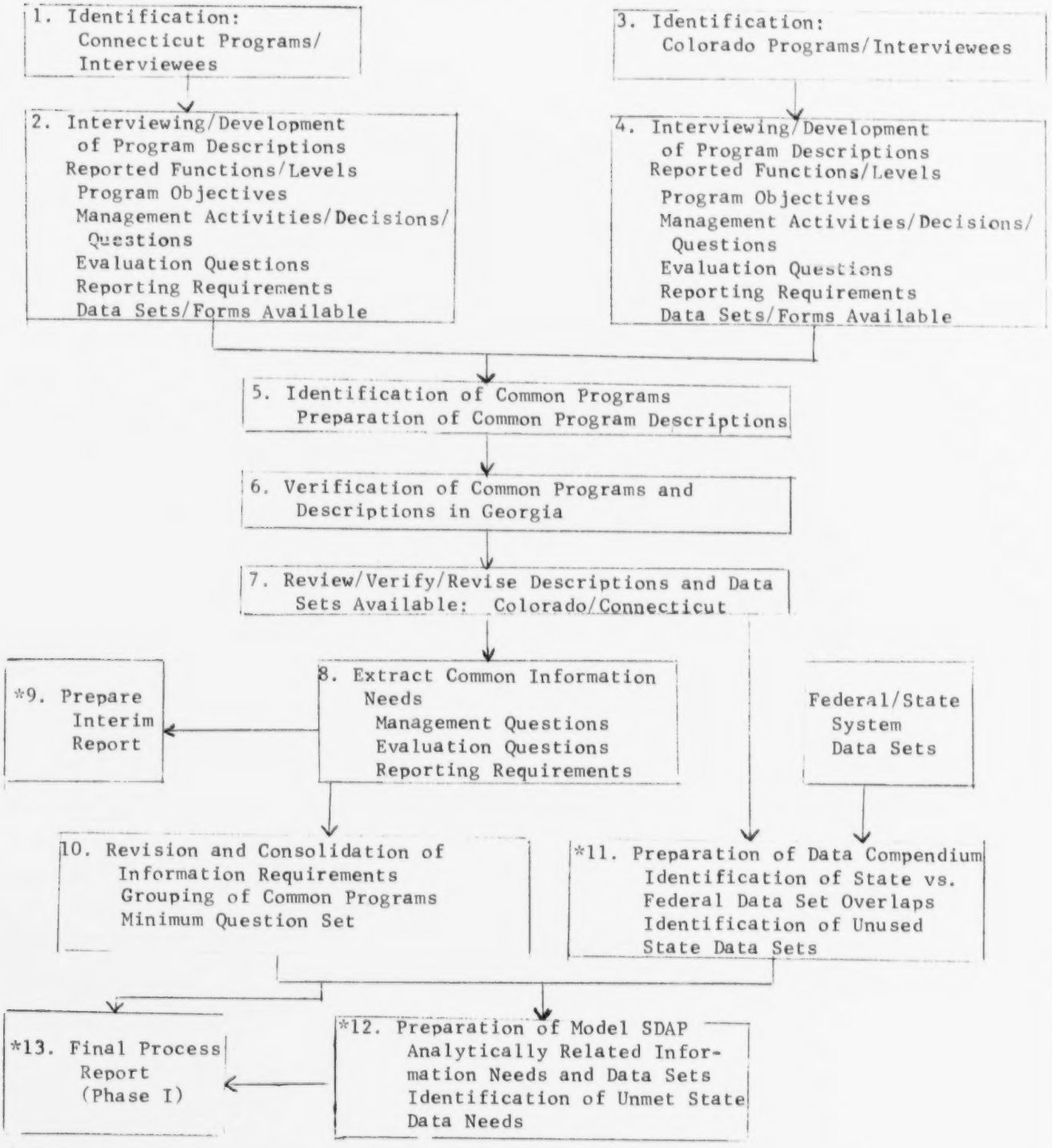
The actual developmental process was obviously dedicated to the objectives of, first, identifying what program management information requirements were common to several SEA's, second, the identification of relevant data streams and forms, and third, the definition of the analysis processes necessary to translate data into usable information to meet these needs. It is also perhaps obvious that the process was posited on the assumption of a high degree of commonality of interests, activites and information needs across SEA's. This assumption was based on the belief that the business of education and the requirements of its clients in various States necessarily lead to highly similar programmatic efforts in the SEA's to meet the observed educational and service needs. Thus, the developmental process was designed to capitalize on the underlying commonalities of the SEA's through an iterative development of the common areas of programs, of management activites related to these, and of the information needs and data availabilites necessary to support these. It is now believed that this assumption and the process have been justified by the observations made and the data collected in the course of the study. The actual extent of such commonalities across SEA's is discussed in the next section, here it can be observed to represent a high proportion of the total programmatic efforts of the SEA's.

Procedural Considerations

The developmental process may best be described by first relating several procedural considerations and decisions. Then the process shown in Exhibit B-1 may be described in detail.

EXHIBIT B-1

SDAP DEVELOPMENT PROCESS


1. Identification: Connecticut Programs/ Interviewees
3. Identification: Colorado Programs/Interviewees
2. Interviewing/Development of Program Descriptions Reported Functions/Levels Program Objectives Management Activities/Decisions/ Questions Evaluation Questions Reporting Requirements Data Sets/Forms Available
4. Interviewing/Development of Program Descriptions Reported Functions/Levels Program Objectives Management Activities/Decisions/ Questions Evaluation Questions Reporting Requirements Data Sets/Forms Available
5. Identification of Common Programs Preparation of Common Program Descriptions
6. Verification of Common Programs and Descriptions in Georgia
7. Review/Verify/Revise Descriptions and Data Sets Available: Colorado/Connecticut
*9. Prepare Interim Report
8. Extract Common Information Needs Management Questions Evaluation Questions Reporting Requirements
Federal/State System Data Sets
10. Revision and Consolidation of Information Requirements Grouping of Common Programs Minimum Question Set
*11. Preparation of Data Compendium Identification of State vs. Federal Data Set Overlaps Identification of Unused State Data Sets
*13. Final Process Report (Phase I)
*12. Preparation of Model SDAP Analytically Related Information Needs and Data Sets Identification of Unmet State Data Needs

N.B.: Numbers are Keyed to the Text.
* Designates Products of the Study.

Definition Development

The first major problem was the need to define programs and program management so that these could be meaningfully used in relation to the SEA personnel. This problem was inherent in the original delimitations of the project which confined the scope of the effort to "program management." This term was then ill-defined and a working definition had to be developed.

The initial guidelines generated with the assistance of the Task Force were that internal SEA management functions, including those of policy and legislative planning, were not part of program management; and, further that programs were systematic approaches to development or provision of educational or adjunctive services. This first cut definition was refined through repeated discussions among SES and SEA personnel, resulting in the following working definition: A program was either a) a systematic SEA activity which resulted in distribution of State or Federal funds to multiple LEA's; or b) a systematic SEA activity, directed toward relatively specific objectives, with a relatively immediate impact upon students, affecting multiple LEA's. Several rather arbitrary decisions were necessary to apply this definition during the course of the study, but in general it worked quite well in identifying programs.

An initial limitation agreed to by the Task Force was to eliminate the whole area of Vocational Rehabilitation from consideration within this study. This decision was based in part on the nature of the programs within the area and in part on the opinion of the Task Force that most SEA's did not have jurisdiction over Rehabilitation, it being usually controlled by a different State agency. On the basis of extending this initial decision of the Task Force, SES later eliminated post-secondary programs and State-operated schools or school systems from consideration. The former are frequently regulated by a separate Board (e.g. Higher Education), while the latter activities appeared to entail program operations to a much greater extent than program management, per se, and also are not universally characteristic of SEA's (although they later appeared to be more prevalent than was initially believed).

Another definitional problem which arose was the question of what really constituted management of a given program and who performed what aspects of the management. These matters were necessarily resolved on an individual basis for each program through the actual interview process with the person(s) responsible for each identified program. The interview formats developed for this purpose assisted in this resolution, guiding the interviews toward the functions performed by each interviewee with respect to various program areas. These formats were developed prior to visiting Connecticut and revised on the basis of initial interviews there. The final form, including the list of management functions to which the interviewee responded, is shown as Appendix A.

Conduct of Interviews

Interviews were conducted with all personnel who could be identified as connected with an SEA activity which was likely to be a program according to our definition. SES was greatly assisted in the definition of likely programs and the identification of the appropriate personnel for interviews by many SEA personnel in each of the states visited. Connecticut interviews were conducted in June and early July and Colorado interviews occupied late July and early August. Interviews were conducted mainly on a one-to-one basis and sometimes required as much as three hours. (Georgia interviews for verification purposes took place in September.)

The purposes of the interviews in Connecticut and Colorado were: to develop an overall description of the respondent's program management activities and of the program requirements for other management, if any; to identify his management information requirements related to these activites; to identify programmatic evaluation and reporting requirements; and to identify the information and data inputs, reports, forms, etc., related to his various program management functions. In this step it was found to be extremely difficult to obtain detailed data from some interviewees about their management activities, especially their decision or choice functions and the information specific to these points. At least it was difficult to get some of the respondents to think and talk in those terms. Therefore, in some cases the interviews and the resulting program descriptions were less precise than desirable in this critical area. This problem resulted in having to draw inferences from the data available including the interviewer's notes, during the extraction process described later.

Program Descriptions

The interviewer took notes and collected forms and reports for later study. As soon as practicable, the interviewer wrote up his notes in the form of a program description, the content of which is outlined in Exhibit B-2. It should be noted that these program descriptions represent what the program manager TOLD the interviewer about the program; they are not the result of direct observation of the program itself. Thus, the validity of the program description is to a great degree dependent upon the perceptiveness of the interviewees with regard to their management activities. In some cases several of the interviewees proved to be concerned with the same program as we defined it, and in these cases the program description was written to reflect the views of all.

Details of the Process

From this point on the course of this report parallels the steps shown in Exhibit B-1, above.

1. Identification of Programs/Interviewees, Connecticut

Liaison between the contractor and SEA personnel was first accomplished through the Connecticut member of the User's Guide Task Force. Using this person as a contact point, members of the Connecticut State Department of Education (SDE) were informed of the project and the impending visits of contractor personnel. On their first visit, key contractor personnel met with key SDE personnel in a series of brief discussions and interviews arranged by the liaison, during which the goals of the project were discussed and cooperation for further contacts was secured. During these first visits, information was collected regarding the organization of the SDE, the range of programs being dealt with, and the managerial responsibilities for each. In general, programs were eventually identified by discussing possibilities abstracted from written materials and prior discussions with whichever SDE personnel appeared cognizant. In turn, these discussions led to sharper definitions of programs, and the identification of program management personnel for each.

EXHIBIT B-2

PROGRAM DESCRIPTION FORMAT

A. Program Title and Authorizing Legislation

B. Reporter

C. Required Program Functions

- o Planning
- o Evaluation
- o Evaluation Reporting
- o Project Administration
- o Dissemination/Reporting
- o Financial Management
- o Personnel

D. Program Requirements

1. Purpose
2. Objectives/Activities
3. Target Groups

E. Program Management

F. Information Requirements

G. Reporting Requirements

2. Interviewing and Development of Program Descriptions, Connecticut.

As the Connecticut data collection was the first in the project, and as the techniques used were iteratively developed during this time, the data collection process for Connecticut is described below in some detail.

SES's approach was to employ interviews to gain data on management functions and informational requirements, and to identify informational availabilities through examination of existing forms, reports, and instruments used by the SDE. Overlaps and gaps in informational requirements and availabilities were to be determined through comparative analyses of these basal data.

This approach was more or less formalized into the following steps:

a. Identification of relevant programs and individuals for interviewing as described in Step 1, above.

b. Design of interview formats and worksheets allowing data in all categories to be collected in one interview.

c. Schedule and conduct interviews:
   1) Modify interview format as necessary.
   2) Expand or shorten schedule as appropriate.

d. Perform comparative analyses.

In general, this procedure was followed successfully. The actual outputs of Step b were two forms, one for collecting function and informational requirement data and the other for recording descriptive data about forms containing available information. The first interview, however, indicated that one of the forms which had been designed was inappropriate to the task. A new design was developed. Another interview was conducted using the new interview format and still further modifications seemed warranted. These were made and finally the format which was used to the end of the process in Connecticut was achieved. (As mentioned earlier, this form is shown as Appendix A.)

At the same time, it was discovered that an effort to establish program objectives within the SDE had produced sets of objectives written by many of the personnel to be interviewed. It seemed likely that these could be used during the interviews to provide partial bases for communication about program functions and activities during the interview process.

Also during this time data already received from the SDE about existing forms was compiled into a list by Bureau of form numbers and titles showing whether the form was received or sent out by the Bureau. It was decided to use this material as well during the interviews.

An interview employing the final form was conducted successfully as follows:

- o The interview respondent is asked for basic identification data.
- o The respondent is asked to identify the functions he performs and the level of performance. (A prepared statement of functional definitions is presented to the respondent at this point.)
- o The respondent is asked to relate the indicated functions to specific programs.
- o The respondent is presented a copy of his stated objectives and asked to modify them if they are not up to date.
- o The respondent is asked to review the input and output forms he works with and to explain which informational sections or elements aid him in program management and how. Whenever possible copies of reports and forms are retained by the interviewer. Due dates and legal requirements are also noted.
- o The respondent is finally asked to cite those informational requirements which are not being met through existing availabilities. Again, needs are recorded in terms of the questions the respondent wishes answered.

With the occurrence of a successful interview some idea of the amount of time required for interviewing was gained. Based on this and the SDE personnel identifications developed earlier, the Task Force liaison was contacted and requested to schedule interview appointments. At this time the list of people to be seen was expanded to include those who were identified as responsible for the processing of specific forms and reports but who had not been selected earlier as key program people.

The scheduling process did not work completely smoothly. At first, some required persons could not be reached, which caused delays in the arrangement of appointments. Then it was found that some interviews took longer than others which caused blank spots in the interviewing day. Neither of these situations endured for more than a day or two, for it was discovered that frequently no formal appointment was required, that people were often free enough to be interviewed immediately upon request.

With this realization, the interviewers asked permission to make their own appointments with prospective program interviewees. This "freedom to contact" allowed them to produce a schedule and to make modifications to it with little effort. In the event that an interview terminated ahead of schedule it was frequently possible to move directly to another respondent with no loss of time. In this fashion, it was sometimes possible for a single interviewer to accomplish three and occasionally four interviews in a day.

As the interviews progressed, attempts were made to write up narrative program reports based on the interviews which had been conducted. It was discovered, however, that until an entire Bureau had been canvassed there was no certainty that all data about a given program within the Bureau had been collected. This coupled with the fact that interviewers were beginning to see two and three people a day, which left little time for other activities, caused program write-up activity to be postponed.

During the next two weeks, interviewing proceeded smoothly. In addition to personnel directly involved in program management, interviews with Bureau chiefs were conducted, and by the end of this period only a few people who had been previously unavailable remained to be seen. It required three days in the fifth week to interview these and a key Associate Commissioner and the Deputy Commissioner, thus concluding the interview process in Connecticut. Interviews with Bureau chiefs followed roughly the same format as those with program people although considerably more emphasis was placed on management functions and informational needs than an analysis of actual reports. Interviews above the Bureau level were unstructured; in general they began with the interviewer's summarization of the activities in Connecticut followed by request for comments and elaborations from the respondent.

Once the interviewer had collected all of the interviews relevant to a particular program, he attempted to integrate these data into a single narrative Program Description covering the topical outline shown previously as Exhibit B-2. The Program Description format itself was developed iteratively from attempts to write up descriptions based upon the first several

interviews. After going through several forms, it was decided that the outline shown in the Exhibit was a suitable way to consolidate and present the information crucial to the further development of the model. The final Program Descriptions were intended to be the basic documents to be used in identifying the commonalities between Connecticut and Colorado, as well as the basic source for the abstraction of the evaluation reporting and information requirements associated with program management functions for each of the common programs.

There were 20 programs identified and studied in Connecticut. They are listed, along with the names of the interviewees, as part of Appendix B to this report. The actual Program Descriptions were presented as Appendix A to the Interim Report (October 1971).

3. Identification of Programs/Interviewees, Colorado

The process followed here was identical to that employed in Connecticut. Working through the Task Force liaison person from Colorado, orientation and coordination visits were accomplished, followed by the identification of programs and their cognizant personnel, scheduling, and interviewing.

4. Interviewing and Development of Program Descriptions, Colorado

Again, the procedure employed in Connecticut was directly applicable here. However, the same form used in Connecticut was used here without further iterative modification. The interviews were conducted in a similar manner, and required about three and one-half weeks for completion. Following the completion of the interviews, Program Descriptions were again written, to the same format used in Connecticut. The 20 programs identified and studied in Colorado are also listed in Appendix B to this report, along with the names of the interviewees for each. The actual Program Descriptions for these programs were presented as Appendix B to the Interim Report (October 1971).

5. Preparation of Common Program Descriptions

The next step involved the comparison and extraction of the commonalities across the programs identified and described in the two states. This called for a review and synthesis of the data contained in

the Colorado and Connecticut Program Descriptions and the identification of common programs, their management requirements, and their information, evaluation, and reporting requirements. In general, this process required that the analyst study the Program Descriptions prepared for each of the two states, along with the backup forms, notes, publications, and other materials. Usually it was obvious as to which programs were candidates for the designation of "common". In fact, it should be noted that during the Colorado data collection phase, the analysts looked for the existence of the programs found in Connecticut. Conversely, the Connecticut data was reexamined in areas where Colorado appeared to have a program not found in Connecticut.

In general, the analyst regarded programs as common if they served similar objectives in similar ways. Often common programs had the same or highly similar funding sources. Often they had the same or similar reporting requirements and management requirements. It was, however, a judgmental process. And this was particularly true in the cases where several programs in one state seemed to be subsumed under one in the second state. In such instances the analyst tended to define the common program as including the several programs in the first state.

Once the analyst had determined that a common program existed, he prepared a Common Program Description, following the same format and outline as that used for the original Program Descriptions. The Common Program Descriptions emphasized the common characteristics of the programs in the two states, but where there appeared to be significant differences, these were noted in asides within the Descriptions. These Common Program Descriptions formed the basis for the following verification steps, and for the subsequent extraction of Common Program Evaluation Questions, Common Program Management Questions, and Common Program Reporting Requirements. (These three sets of questions were deemed to cover "common information needs", and were reported by program as products in the Interim Report (October 1971)). A list of the Common Program Descriptions is shown in Exhibit B-3; the Descriptions themselves comprised Appendix C of the Interim Report.

EXHIBIT B-3

COMMON PROGRAM DESCRIPTIONS

1. Bilingual Education Program
2. NDEA Title IIIA Program
3. Migrant Program
4. Management of General State Grants Program
5. School Assistance in Federally Affected Areas
6. Transportation Grants Administration Program
7. School Library Program
8. Driver Education Program
9. Vocational Education Services Program
10. Drug Abuse Program
11. Special Education Program
12. ESEA Title III Grant Management Program
13. Compensatory Education Program
14. School Food Services Program
15. Adult Basic Education Program

6. Verification of Program Descriptions, Georgia

In order to verify the commonalities identified between Colorado and Connecticut, the Common Program Descriptions were taken to the Georgia SEA for review. In this case the procedure differed somewhat from that employed in Colorado and Connecticut. There was no effort to identify all of the programs extant in the Georgia SDE. The data collection was concerned only with those programs which had been found to be common between Colorado and Connecticut. Furthermore, the interviews were confined primarily to members of the Division of Research, Planning, and Evaluation, since this Division had recently performed an internal review of programs and felt that the purposes of the project would be adequately served by this procedure. (The User's Guide Task Force approved this change in method.) These verification visits were carried out in September.

The procedure used in the Georgia interviews was as follows. The Task Force liaison with the Georgia SDE made the preliminary arrangements for the contractor visits to the SEA, and coordinated the identification of appropriate interviewees and the scheduling of the interviews. Again the interviews were on a one-to-one level, though the interviewee might have been the respondent for more than one of the programs. The procedure used was to ask the respondent first to summarize briefly the salient details of the program in question, and then to review the Common Program Description for the other two states for that program. He was then asked to comment on the similarities and differences between the Common Program Description and the conduct of that program by the Georgia SDE. This method worked very well, and produced a number of points of commonality. The Common Program Descriptions were not actually revised on the basis of these data, but addenda to the Common Program Descriptions were prepared summarizing the additional data gathered in the Georgia interviews so that they might be included in subsequent steps. Only one of the 16 Common Programs was not found in Georgia -- the Bilingual Program.

7. Verification of Program Description Accuracy

As a final verification step, the completed Program Descriptions and Common Program Descriptions were returned to Connecticut and Colorado for review by those persons who had originally served as interviewees. First

the completed Descriptions were mailed to the interviewees for their review, and then visits were made to these two SEA's to pick up the reviews and discuss them. This step was taken in order to resolve a few issues which had arisen during the course of the preparation of the Descriptions and/or the collection of the verification data in Georgia. In addition, it was felt that such a step would reduce the possibilities of transcription and interpretive errors which may have otherwise crept into the final versions of the Descriptions. Comments and critiques were usually brief and of a minor nature. These final verifications were carried out during October, and appropriate revisions were made.

8. Extraction of SEA Common Information Needs

Common information requirements for each Common Program were derived from the available data about the program management, evaluation, and reporting activities as reported in the course of data collection described above. These common requirements were developed within three areas: management questions; evaluation questions; and reporting requirements. After additional analysis and revision (below), these information requirements constituted the basis for the definition of the analysis procedures of the Model SDAP.

The first set of information requirements for each program as derived through an analysis process directed toward the development of a comprehensive list of the types of management, or evaluation, or reporting information needs the program manager would be likely to have. The starting point for this derivation was the management description and information reported by program managers and all other available data about the programs in each SEA. It was mentioned earlier that program managers frequently had difficulty reporting specific management decision functions or talking about specific information needs to support their decisions. This meant that for many of the programs, specific management information needs were not spelled out as completely as desirable. This was sometimes true with respect to a program's evaluation information needs, also. It did appear that the data collected and the descriptions that had been developed included these requirements as implications rather than as explicit statements. Thus, the task at hand was to explicate these requirements based on the program managers' reports and data.

This task was approached through direct examination of the available data about each specific program and the program management, evaluation and reporting functions spelled out by the reporter. These were the basis for the extraction of the three kinds of needs: management questions; evaluation questions; and reporting requirements. The extraction process was inferential. The analysts assumed the role of newly assigned managers of the subject program and examined all materials and data with the view of defining the questions necessary to allow the performance of the program functions as reported. The questions to be derived were to cover all aspects of information which would be considered essential to the conduct of the program. This resulted in the development of three sets of questions and requirements:

1) Management questions - a set of questions asking for information necessary to an understanding of the program and essential to its operation as described; this is the set of information considered necessary to allow the manager to plan and conduct his program in the State. Such information includes basic information about SEA policies and plans which might affect the program as well as legislative and other guidelines about the specific operations of the programs. However, the major portion of such information needs are for data related directly to the choice of alternative actions at management decision points. These management questions include items directed toward both of these general information needs types.
2) Evaluation questions - These are questions which call for information necessary to the assessment and appraisal of both the management and the effectiveness of the program. They relate to overall program management, and specifically to the decision functions therein. They seek information which provides the basis for determining whether or not the program is meeting its objectives or goals, and whether or not the program should continue to operate as is, or should be changed in some ways, or should cease to exist. These questions also frequently call for data which are

requested for informational purposes as well as for immediate applicability to specific program management decisions. Such informational purposes may be served by data relating to specific pupil or project progress, etc., and frequently the same data may serve both managerial and informational purposes.

3) Reporting requirements - For the first set of requirements no attempt was made to expand the requirements as reported by the SEA personnel. These were expanded later into questions to be answered through the SDAP development.

This analysis was specifically pointed at the extraction from the program reports of all possible, meaningful, questions pertaining to these three requirements areas. However, there was also a conscious effort to avoid creation of questions which had no meaning within the context of the specific program under consideration. For example, the SEA manager has no basis for asking questions about the impact of SAFA funding on specific pupils, since there is no SEA control nor LEA accountability of these funds.

The first set of Common Information needs derived in this manner was reported in the Interim Report (October 1971).

9. Preparation of the Interim Report

The Interim Report was prepared and submitted to the Ohio SDE and to the User's Guide Task Force to relate the developments of the project up to that time, to present the Program and Common Program Descriptions, and to present the sets of management questions, evaluation questions, and reporting requirements identified in the first analysis of the data. The report was presented to a meeting of the User's Guide Task Force at the Burlington Hotel, Washington, D.C., on 2 November 1971, and was well received. In the process of developing the required questions, as described above, some inferences were made about the type of management required by the various Common Programs. A simple classification system was set up on the basis of the management functions required, and programs were sorted into four types as defined in the next section.

10. Revision and Consolidation of Information Requirements

Although the Information Needs reported in the Interim Report included all of the information which could be derived from the data on hand, it was decided that some additional analysis of these information requirements was desirable in terms of some expansion and reorganization of the questions developed. Specifically, the information requirements for each Common Program were expanded where necessary, and the Common Programs themselves were grouped in an effort to identify common elements across the Common Programs. The intention of this effort was to develop a "minimum set" of the questions, thus avoiding duplication and redundancy in the final products. A four-stage procedure was followed to achieve this result:

a. The Common Programs were examined for similarity of functions, objectives and/or activities and categorized on the basis of such similarities;

b. The management evaluation questions were examined as to the needs for expansion or more specification; also, the reporting requirements were expanded into questions being asked within each report;

c. When an expanded question set had been formulated for each program, these were examined across programs, within the categories developed as the first step, to identify:

    1) Questions which were identical across programs
    2) Questions which were essentially identical across programs except for differences in target groups, or probable data sources, or other minor points
    3) Questions which were unique to the program for which developed.

d. The last step in this program was the examination of the questions in subsets 1) and 2) above across the program categories to identify any further commonality of questions.

When these comparisons had been accomplished, the resulting minimum set of questions for each program or program type constituted the final set for which analysis procedures were developed. A description of the process of carrying out these steps follows.

The first basis chosen for grouping programs was similarities in program management functions. It was observed early in the data collection phase, that certain basic funds distribution programs were operated with very little opportunity for discretionary management by the SEA personnel. Mainly the manager performed the steps necessary to insure compliance with the legal basis for the funds distribution program. Other programs were observed to require a good bit of interactive management between the SEA personnel and the LEA's or other program recipients. It appeared that this dimension, the degree of SEA manager's control or options for management, might be a meaningful basis for a first categorization of common programs.

Accordingly, a set of the management functions which were performed by SEA personnel in relation to all programs was derived and used as the basis for development of categories of Common Programs. Exhibit B-4 shows the derived list, which, though not necessarily exhaustive of management functions, contains the functional elements essential to the categorization process employed. This list of functions was generated directly from the reported management functions and activities of the program managers as indicated in the Common Program Descriptions.

Exhibit B-5 presents the Common Programs listed within the four categories of program management activities which were derived on the basis of the differences in functions across the programs. These differences in program functions from category to category are indicated directly by the differences in the numbers following the program name, where the numbers refer to the listed program functions in Exhibit B-4 and indicate that the listed function is performed in management of this program. The four derived categories are described below.

Aa - Compliance Management of Funds Distribution, with Little SEA Option: This appears to be the least complex set of programs from the point of view of management functions performed. Management functions are straightforward and are related to the disbursement of Federal or State funds to LEA's on the basis of one or more specific legislative decrees. Funds are disbursed on the basis of a fixed formula, defined by the authorizing legislation or by highly specific guidelines

EXHIBIT B-4

SEA PROGRAM MANAGEMENT FUNCTIONS

1) Funds are given to LEAs (G = grant; R = reimbursement).

2) Funds are allotted by formula with SEA making no decision on quality of proposal or how much money a particular LEA should receive.

3) SEA reviews proposals, makes recommendations to Federal Government but has no control over which projects are funded and how much money a project should receive.

4) SEA reviews proposals and based on the quality and content of the proposal, the SEA may reject the proposal or fund the project. The amount of funding depends on the SEA review.

5) SEA consults with the LEA to help establish eligibility.

6) SEA reviews grant applications for correctness, completeness, adherence to guidelines, etc.

7a) SEA consults with LEA in project planning and development and assists in preparation of proposals.

7b) SEA may assist the LEA in filling out the application so that the LEA will receive its fare share of the available funds.

8) SEA monitors local projects.

9) SEA conducts evaluations of projects.

10) SEA makes reports on expenditures, activities, and evaluations to Federal Government.

11) SEA formulates a State Plan and/or defines statewide program objectives and priorities.

12) SEA encourages consideration of new projects.

13) SEA conducts workshops and training programs to train LEA personnel.

14) SEA aids the LEAs in obtaining Federal or other outside funding.

15) SEA is involved in certification of teachers.

16) SEA provides technical assistance in solving project problems.

EXHIBIT B-5

CATEGORIZATION OF PROGRAMS

Aa - Compliance Management, No State Options

Transportation Grants	:	1_R, 2, 6, 16
School Food Services	:	1_R, 2, 5, 6, 9, 10, 12, 16
SAFA	:	1_G, 2, 5, 6, 7b, 10
State Grants	:	1_G, 2, 6

Ab - Compliance Management, State Options

ESEA II	:	1_R, 2, 6, 10, 11, 16
Connecticut Driver Education	:	1_G, 2, 6, 7a, 10, 11, 16
Compensatory Education	:	1_G, 2, 6, 7a, 9, 10, 11, 16
Migrant	:	1_G, 2, 6, 7a, 9, 10, 11, 16

B - Discretionary Management

ESEA III	:	1_G, 4, 7a, 8, 9, 10, 11, 16
Connecticut Drug Abuse Education	:	1_G, 4, 7a, 8, 9, 10, 11, 13, 16
Special Education	:	1_G, 4, 7a, 8, 9, 10, 11, 13, 16
Adult Basic Education	:	1_R, 4, 7a, 9, 10, 11, 13, 16
NDEA IIIA	:	1_R, 4, 7a, 9, 10, 11, 16
Vocational Education	:	1_G, 4, 7a, 8, 9, 10, 11, 16

C - Consulting, No Funds Distribution Activities to LEAs

Colorado Drug Abuse Education	:	7a, 9, 10, 13, 14, 16
Colorado Driver Education	:	7a, 9, 11, 13, 15, 16
Bilingual	:	3, 7a, 9, 13, 14, 16

interpreting the legislation, which are not modifiable by the SEA manager. The SEA has no discretion as to the amount of funds to be given to an LEA, nor whether it can receive the funds, nor as to what the LEA can do with the funds. Program objectives, goals, priorities and disbursement rules are fixed by the authorizing legislation or the guidelines.

Ab - Compliance Management of Funds Distribution, with SEA Options: This program category is highly similar to the first set and is differentiated only by the fact that the SEA personnel have some discretion as to what can be done with the funding. This discretion is normally exercised through the preparation of a State Plan for the funds distribution program. This State Plan allows the SEA personnel to define and influence the thrust or direction of the program funds usage within the State. There is still no discretion nor authority to determine whether or how much money is going to which LEA's. The SEA can delay or withhold funding to assure LEA compliance with the State Plan.

B - Discretionary Management of Funds Distribution: This is perhaps the most complex of the program groups on the basis of the management opportunities and options for the SEA personnel. SEA managers here have optional control over whether, and how much, and for what purposes funds will be authorized to an LEA. The SEA personnel have relatively complete discretion as to which of multiple proposals prepared by LEA's will be funded and most frequently at what levels they may be funded (within some limits imposed by legislation). Discretion is exercised on the basis of the merits of the proposed LEA projects and their relations to the SEA-prepared State Plan objectives, goals and directions for the State. Through these plans and selection of proposals to be funded, the SEA personnel have a great effect on the development and expansion of these programs in the State.

C - Consulting and Technical Assistance, No Funds Distribution: These programs do not relate directly to the other categories in terms of complexity of management, since they are not complicated by the financial management aspects inherent in the other program types. In this type of program, the SEA plays primarily a consulting role of providing technical assistance and advice to LEA's on project development and problems, and

the preparation of proposals. The SEA may also carry out certain activities of its own. These may take the form of workshops, training programs and evaluations.

The classification of the Common Programs by State into one of the above four categories is summarized in Exhibit B-6. In Connecticut, four programs fell into Category Aa (Compliance, No State Options); four programs fell into Category Ab (Compliance, State Options); six programs fell into Category B (Discretionary); and one program was assigned to Category C (Consulting). In Colorado, four programs fell into Category Aa; three programs fell into Category Ab; five programs fell into Category B; and three programs fell into Category C.

There are two programs which were assigned to different categories in Connecticut and Colorado. These are Driver Education, and Drug Abuse Education. In Connecticut, funds for the Driver Education and Drug Abuse Education Programs are distributed to the LEA's on a compliance and discretionary basis, respectively. In Colorado, however, in both programs the funds are used at the SEA level only and there is no distribution of State or Federal funds to the LEA's. In both these cases, the SEA performs only the consulting and assistance functions with respect to LEA projects. For the other 12 programs which existed both in Connecticut and Colorado, the program functions were essentially the same in both States. This exhibit also shows the initial classification of the Georgia programs. It can be seen that four programs fell into the Aa group and three into the Ab class, and the remaining seven programs were classified as B-type programs.

These program groups were then examined as to the degree to which the several programs within a type had identical information requirements. This examination led to a minimum set of questions for each group which satisfied a large part of the information needs of most of the programs within a group.

It was discovered that some management questions could be stated across program categories, and at least across programs within categories; evaluation questions could be stated across some or all programs within categories; and reporting requirements were relatively specific to programs.

EXHIBIT B-6

CLASSIFICATION OF PROGRAMS BY STATE

Program Name	Conn.	Colo.	Ga.
1. Transportation Grants	Aa	Aa	Aa
2. School Food Services	Aa	Aa	Aa
3. SAFA	Aa	Aa	Aa
4. State Grants	Aa	Aa	Aa
5. ESEA II	Ab	Ab	Ab
6. Driver Education	Ab	C	B
7. Compensatory Education	Ab	Ab	Ab
8. Migrant	Ab	Ab	Ab
9. ESEA III	B	B	B
10. NDEA IIIA	B	B	B
11. Drug Abuse Education	B	C	B
12. Special Education	B	B	B
13. Adult Basic Education	B	B	B
14. Vocational Education	B	B	B
15. Bilingual	C	C	*

Legend:

Aa = Compliance Management, No State Option

Ab = Compliance Management, State Option

B = Discretionary Management

C = Consulting, No Funds Distribution Activities to LEA's

* Ga. has no bilingual program

These minimum sets of information requirements thus resulted in the development of an overall SEA Data Analysis Plan which is much more efficient than otherwise. However, they are not a part of this document, but are found in Part II, the Model I SDAP, itself.

11. Preparation of Data Availability Compendium

It was desired to study the data availability for each of the Common Programs in terms of three aspects: a) The overlap in data coverage between the states and between the states and the Federal/State System; b) The state data sets not used in program management; and c) the expressed state program management information needs not met by the existing data sets. In order to accomplish this, it was decided that a complete data compendium would be necessary. The Data Compendium (which forms Part III of the report of this project) was developed as follows.

First the analyst assembled all of the data, including all of the forms, relevant to a Common Program for each of the two states, Connecticut and Colorado. These data were cross-checked with the Common Program Description to ensure that all data sources for the Program had been indentified. Then the contents of each of the forms were inventoried in terms of data types in a format showing the availability of the data type on Connecticut forms, Colorado forms, and Federal/State forms, by form and item number. In addition, the analyst indicated identicality or the source of difference where the data type was treated differently on one or more of the three possible sources. This procedure was carried out for each form relevant to the Common Program, and then for all of the Common Programs.

Thus, the Data Compendium makes clear at a glance the extent of data overlap between the states, and between the states and the Federal/State System forms. The state data sets used in program management as reviewed in this project were noted in the development of the Model SDAP. They are indicated in the Data Compendium by asterisks. (Conversely, the unused set has no asterisks.) State program management data needs currently unmet are included with the model SDAP itself, as indicated by those questions for which no relevant data to be analyzed was found available in the Data Compendium (blanks in the Data Source Column of the SDAP).

The Data Compendium has been prepared as a separately bound Part (III) of the products of the present project.

12. Preparation of the Model SDAP

The final stage of the Phase I project was the preparation of the generic Model I SDAP, itself. This consisted of a number of steps, the first of which was to decide on a format for the Plan. It appeared obvious that the SDAP should be organized around the information requirements. In this case that meant using either program groupings or type-of-question groupings to guide the layout of the Plan (the use of a matrix format employing both was ruled out because of the length of some of the sections of the Plan). After some deliberation, it was decided to subordinate type-of-question to program groupings for the organization of the final model SDAP. Thus, in general, the format begins with questions which cut across all programs, proceeds to groups of programs, and finally to individual programs. Within each level questions are grouped according to type: management, evaluation, or reporting requirement. Of course not all combinations of program groups and question types occur, but in general this is the schema for the final model SDAP, which has been prepared as a separate Part (II) of the products of this project.

The second step in the preparation of the model SDAP involved the derivation of appropriate analytic techniques for dealing with each of the questions. This step was carried out without regard for the data or its availability, in order that the information requirements and their analyses might stand alone. The actual development of analysis procedures was straightforward and consisted of the following procedure. First, each of the final questions resulting above was examined to define the precise kind and extent of data required to provide the information requested. Next the data treatment which must be performed to create the information requested was specified. This data treatment is of course the specific analysis procedure required for the question. It may consist of simply tabulating some data from LEA's, or of summing and averaging head counts of pupils, or it may consist of the combination of two or more data types

in various ways. Some questions required the rather complex analysis of some special data types, but this was not required often. An example of a data question which might require a more complex analysis would be one which requested comparative data on achievement of groups of students within different subgroups of the student population. Such a request might lead to definition of a variance analysis format for purposes of means comparisons among groups.

The definition of the data treatment required to answer a question usually implicitly defines the typical output which can be expected from the analysis. Where this was not so, an indication of the probable output of the analysis was stated.

The final step in the preparation of the model SDAP consisted of indicating the available data sources for each of the analysis-question combinations. This step was accomplished by referring to the Data Compendium for the applicable Common Program and indicating the relevant data source for the data specified by the analysis to answer the question posed. It should be noted that the data sources had to be listed in generic form, although the Data Compendium was more specific, since the model SDAP was required to apply to multiple SEA's. Thus it was decided to list the data sources in terms of types of reports and forms rather than using the specific item numbers or form numbers for Colorado and Connecticut. During the process of relating the data sources to the analysis-question combinations, the analysts marked the Data Compendium with asterisks in all cases where the available data were required by any program question. Thus, those entries in the Data Compendium which do not have an asterisk represent data not used in any of the analysis-question combinations. The model SDAP itself indicates by blanks in the Data Source column where needed data is not collected by the current system.

13. Preparation of Process Description

Early in the progress of the project members of the User's Guide Task Force requested that the contractor undertake the preparation of a report which would detail the procedures followed during the development of the generic Model I SDAP. It was hoped that by detailing the procedures

followed, and mentioning some of the problems and errors encountered, the process would be explicated sufficiently to be of use to those SEA's who might wish to develop their own models or apply this one, as a guide to their efforts. In preparing this document, which is a Part (I) of the products of the project, SES decided to divide it into two sections. The first section would serve as an overview of the project, while the second would fulfill the requirements of the detailed process report.

A Final Word

The products of this project to develop a generic model State Data Analysis Plan for program management are comprised of three parts: 1) The present document, containing an overview of the project and a detailed description of the process; 2) The Model I SDAP itself, with an introduction telling how it may be used; and 3) The Data Compendium, presenting a complete review and comparison of common-program-related data types for Colorado, Connecticut, and the Federal/State System. All three of these products were produced and bound separately.

Scientific Educational Systems feels that the project has been successful in demonstrating the feasibility of the SDAP concept. It now remains to apply the model to specific programs in specific states, and, on the other hand, to extend the model to cover other aspects of SEA management and their required data support systems. Both such extensions are feasible and potentially highly useful to state-level educational managers and evaluators. Both may now be undertaken.

APPENDIX A

SEA Program Management Interview Schedule

SEA PROGRAM MANAGEMENT INTERVIEW SCHEDULE

SES
June 1971

NAME_____ RM_____ PH_____

DIV_____ BUREAU_____

MAJOR RESPONSIBILITY_____

How long on job?_____ in SDE?_____

1. Which of the following functions do you perform and at which level?

	LEVELS		
Functions	Program	Bureau	SEA
Planning	_____	_____	_____
Evaluation	_____	_____	_____
Evaluation Reporting	_____	_____	_____
Project Administration	_____	_____	_____
Development	_____	_____	_____
Review	_____	_____	_____
Monitoring	_____	_____	_____
Reporting	_____	_____	_____
Dissemination/ Reporting	_____	_____	_____
Financial Management	_____	_____	_____
Personnel	_____	_____	_____

2. If you perform any of these for a specific program(s) for which one(s)? (Identify name in relation to summary list. If not there, find out if new program.)

_____

_____

_____

_____

3. For this program(s) we have a list(s) of program objectives and activities. Please examine this sheet and tell us about any difference/errors or changes. (Give 2nd copy of program form to interviewee and record changes below. Repeat for each program indicated by respondent, clearly identify which program):

PROGRAM REPORT DATA

STATE_____ NAME_____

BUREAU_____

DATA NAME	UTILIZATION	LEG. REQ./DUE DATE

APPENDIX B

Program Descriptions and Reporters, by State

CONNECTICUT

Program	Reporters
Migrant Program	Alexander J. Plante, Bureau of Compensatory and Community Educational Services, Bureau Chief
State Aid Grant Program	Frank Livak, Bureau of Educational Management and Finance, Consultant for Grants Management
	James Naughton, Bureau of Educational Management and Finance, Consultant for School Business Administration (resigned)
	Alfred Villa, Bureau of Educational Management and Finance, Chief
Education Professions Development Act Program	Peter LoPresti, Bureau of Teacher Preparation and Certification, Chief
	Anthony Tedeschi, Bureau of Teacher Preparation and Certification, Consultant for EPDA
Bilingual Education Program	Alexander Plante, Bureau of Compensatory and Community Educational Services, Bureau Chief
	John Harrington, Bureau of CCES, Consultant - Bilingual Education
	Kenneth Lester, Bureau of Elementary and Secondary Education, Consultant - Foreign Language
School Lunch Program	Edith Blakeley, Bureau of Federal, State and Local Relations, Consultant - School Lunch Program
Adult Basic Education and Adult Education Program	James Dorsey, Bureau of Compensatory and Community Education Services, Consultant Adult Education
	Alan Hugg, Bureau of Compensatory and Community Education Services, Consultant Adult Education
Education of the Handicapped Program	David Murphy, Bureau of Pupil Personnel and Special Education Services, Consultant ESEA VI

CONNECTICUT (Cont.)

Regional Special Education Services Program	Robert Margolin, Bureau of Pupil Personnel and Special Education Services, Consultant, Grants to LEAs for Regional Special Education Services
NDEA Title IIIA Program	Leonard Garber, Bureau of Elementary and Secondary Education
State Supported Schools for the Handicapped Program	Lucien Zadrozny , Bureau of Pupil Personnel and Special Education Services, Consultant, Title I, State Supported Schools
Drug Education Program	Donald Anneser, Bureau of Elementary and Secondary Education, Consultant, Drug Education
Compensatory Program	Thomas Crane, Consultant, Bureau of Compensatory and Community Educational Services, Division of Instructional Services
Industrial Arts Education Program	Wesley Ketcham, Bureau of Elementary and Secondary Education, Consultant Industrial Arts Education
School Construction Services Program	Richard Howland, Bureau of School Buildings, Bureau Chief
Improving Teachers of the Handicapped Program	Joe R. Gordon, Bureau of Public Personnel and Special Education Services, Assistant Bureau Chief
Driver and Safety Education Program	David Jacobson, Bureau of Elementary and Secondary Education, Consultant - Driver and Safety Education
Vocational Agriculture Program	Lewellyn Turner, Bureau of Vocational Services, Consultant for Vocational Education
ESEA Title III Grant Management Program	Roger Richards, Bureau for Elementary and Secondary Education, Consultant for Title III Coordination
Vocational Education Services Program	Errol Terrel, Bureau of Vocational Services, Chief
	Robert Bennett, Bureau of Vocational Services, Consultant for Program Development
	Richard Wilson, Bureau of Vocational Services, Consultant for Research Planning

CONNECTICUT (Cont.)

State and Federal Aid for Library Education Materials Program	Ralph Goodrich - Bureau of Elementary and Secondary Education, Consultant, ESEA Title II
	Rheta Clark, Bureau of Elementary and Secondary Education - Consultant for School Library Services
	John Crawford - Bureau of Elementary and Secondary Education - Consultant for School Library Services

COLORADO

Program	Reporters
NDEA Title IIIA Program	Kenneth D. Streitmatter, Consultant, Special Programs Unit, Office of Continuing Education
Migrant Program	C. Phil Gore, Migrant Program Supervisor, Special Programs Unit, Office of Continuing Education
Bilingual Education Program	Conrad Romero, Youth Community Relations Unit, Office of Continuing Education
Education Professions Development Act	Marvin J. Eakes, Improved Learning Unit, Office of Continuing Education
School Improvement Program	Leonard Landry, Planning Unit Chief, Office of Planning and Evaluation
Improvement of Public School Support Program	Paul A. Bethke, Planning Unit, Office of Planning and Evaluation
Vocational Education	Leonard Hergenreter, Assistant Director for Program Planning and Development
	Paul Foster, Western Regional Planning Supervisor
	M. G. Hunt, Assistant Director for Professional Development
	Richard H. Edsall, Director of Evaluation
	James Wilson, Associate Director of the Division
ESEA Title II Program	Roberta E. Young, Director of the Library Development and Programs Coordination Unit
Driver Education Program	Robert Sundermeier, Improved Learning Unit, Office of Continuing Education
School Assistance in Federally Affected Areas Program	John Holcomb, Consultant, Special Programs Unit, Office of Continuting Education

COLORADO (Cont.)

Follow Through State Technical Assistance Program	Virginia Plunkett, Special Programs Unit, Office of Continuing Education
Compensatory Education Program	Ward Vining, Director, Special Projects Unit, Office of Continuing Education
	Victor Wall, Special Projects Unit, Office of Continuing Education
	Byron Parks, Special Projects Unit, Office of Continuing Education
ESEA Title III Grant Management Program	Roger Duncan, ESEA III Coordinator, Special Programs Unit, Office of Continuing Education
Drug Abuse Program	Jan Schneider, Improved Learning Unit, Office of Continuing Education
Special Education for Handicapped Children Program	John Ogden, Director, Pupil Personnel Unit, Office of Continuing Education
	David Miles, Pupil Personnel Unit, Office of Continuing Education
	Tony Paulmeno, Pupil Personnel Unit, Office of Continuing Education
Transportation Grants Administration Program	Mary Ann Francis, Consultant for Transportation Grants Administration, Planning Unit, Office of Planning and Evaluation
Adult Basic Education Program	Joseph M. Connors, Improved Learning Unit, Office of Continuing Education
Testing Guidance and Counseling Program	Fred E. Holmes, Office of Continuing Education, Youth Community Relations Unit
Intercultural Community Relations Program	Earl W. Phillips, Youth Community Relations Unit of the Office of Continuing Education
School Food Services Program	Daniel Wisotzkey of the Special Programs Unit of the Office of Continuing Education